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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/019,299 | 03/11/2002 | Johshi Gotoh | P67440US0 | 8811 |

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EXAMINER

ALCALA, JOSE H

ART UNIT

PAPER NUMBER

2827

DATE MAILED: 03/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office

Action Summary

Application No.

10/019,299

Applicant(s)

GOTOH ET AL.

Examiner

Jose H Alcala

Art Unit

2827

DATE of this communication appears on the cover sheet with the correspondence address --

-- The MAILING

Period for Reply

STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM

A SHORTENED STAGE OF THIS COMMUNICATION.

THE MAILING DATE (available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If the period for reply specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified, the extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Failure to reply within the set period later than three months after the mailing date of this communication, even if timely filed, may reduce any
- Any reply received by the Office See 37 CFR 1.704(b).
- earned patent term adjustment.

Status

communication(s) filed on ____.

1) ☐ Responsive to communication(s) filed on ____.2b) ☒ This action is non-final.2a) ☐ This action is final.3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-11 is/are pending in the application.

4a) Of the above claim(s) ____ is/are withdrawn from consideration.

5) ☐ Claim(s) ____ is/are allowed.6) ☐ Claim(s) ____ is/are rejected.7) ☐ Claim(s) ____ is/are objected to.8) ☒ Claim(s) 1-11 are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).a) ☐ All b) ☐ Some * c) ☐ None of:1. ☐ Certified copies of the priority documents have been received.2. ☐ Certified copies of the priority documents have been received in Application No. ____.3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).a) ☐ The translation of the foreign language provisional application has been received.15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.4) ☐ Interview Summary (PTO-413) Paper No(s). ____.5) ☐ Notice of Informal Patent Application (PTO-152)6) ☐ Other: ____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-2, drawn to a printed circuit board, classified in class 174, subclass 260.
- II. Claims 3,4,11, drawn to a method of making a printed circuit board, classified in class 29, subclass 825.
- III. Claims 5-10, drawn to an under filling material, classified in class 524, subclass 198.

2. The inventions are distinct, each from the other because of the following reasons:

Inventions I and III are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the printed circuit board can be made from a polyoxyalkylene polyol in a weight ratio different than the specific 9:1 to 2:8 range. The subcombination has separate utility such as stock material for the manufacturing of rigid foam insulation and packaging materials.

Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process, such as by manufacturing a substrate comprising an underfilling material disposed over a circuit board, and proceeding to heat the solder balls and the underfilling material at the same time, in order to attach the semiconductor package to the substrate.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. Given the complexity of the requirement, a telephone election was not sought by examiner.

5. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jose H Alcala whose telephone number is (703) 305-9844. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Talbott can be reached on (703) 305-9883. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3431 for regular communications and (703) 305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



KAMAND CUNEO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

JHA
March 5, 2003